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Environmental Quality Council, Capitol Building, Helena 59620
Bureau of Reclamation, Attn: Mark Albers, P.O. Box 36900, Billings MT 59107-6900
Bureau of Reclamation, Attn: Scott Boelman P.O. Box 36900, Billings MT 59107-6900
Fish Wildlife and Parks
    Resource Assessment
    Fisheries Division
    Regional Information Officers
    Hatchery Managers
State Library
Jim Jenson, Montana Environmental Information Center, P.O. Box 1184, Helena MT 59624
Janet Ellis, Montana Audubon Council, P.O. Box 595, Helena, MT 59624
Montana Wildlife Federation, Box 1175, Helena, Mt 59624
Lake County, County Commissioners, 106 4th. Ave. E. Polson MT 59860
City of Arlee, Arlee MT
Confederated Salish & Kootenai Tribes, Attn: Sam Morigeau, P.O. Box 278, Pablo MT 59855

Ladies and Gentlemen

The enclosed Environmental Assessment (EA) has been prepared for A project to relieve low water conditions due to drought at the Jocko River Trout Hatchery, Arlee, Lake County MT. The project is proposed on a site owned by FWP and is within the boundaries of the Confederated Salish and Kootenai tribes.

The Scope of the proposed work has been determined to be sufficient to initiate the Montana Environmental Policy Act (MEPA). The items required in MEPA are identified on the EA checklist and addressed in comments where impacts may occur. Additionally items in the checklist address the issues required by the National Environmental Policy Act.

PLEASE RETURN

Any questions on this project should be addressed to the undersigned. Anyone wanting a public meeting on this proposal should also contact the undersigned. All comments should be forwarded by Jan. 14, 1995.

Sincerely,

Thurston Dotson

Thurston Dotson
Fisheries Division
(406) 444-2447

DEPARTMENT OF FISH, WILDLIFE AND PARKS
1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
(406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Drought Assistance to build a canal liner at Jocko River Trout Hatchery

Division/Bureau Fisheries/Hatchery

Description of Project This project will install a plastic pipe collection and transmission line to insure water collected is transmitted to broodstock raceways and not lost to percolation into the ground. The project specifics are to install two 24" PVC lines for approximately 1500 feet. The pipeline will then terminate into the brood raceways at Jocko River Trout Hatchery, Arlee, Lake County, MT. This project is necessary due to receding groundwater levels in the Jocko River Valley. Water levels have dropped to less than historic levels.

Cont'd page 4

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture				X		
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics			X			X
6. Air quality				X		
7. Unique, fragile, endangered, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy			X			X

9. Historical & archaeological sites				X		X

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production				X		
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities			X			X
8. Quantity & distribution of employment			X			X
9. Distribution & density of population & housing				X		
10. Demands for government services			X			X
11. Industrial & commercial activity			X			X
12. Demands for energy			X			X
13. Locally adopted environmental plans & goals				X		X
14. Transportation networks & traffic flows				X		
15. Site Specific Modification System wide				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Bureau of Reclamation, State Historical and Preservation Office (SHPO)

Individuals or groups contributing to this EA FWP, SHPO

Recommendation concerning preparation of EIS Due to the minor impacts on environmental resources identified in this review, it was determined that an EIS was not required.

EA prepared by : Thurston Dotson Date: November 30, 1994

Description of Project Cont'd

Part of the water supply to the brood raceways is supplied by surface water which flows over open ground to the raceways. As the drought of recent years worsened, the limited water supply reached the raceways in decreasing amounts due to percolation into the ground. This project will ensure collected water will reach the raceways.

Appendix A shows the area involved in this project. Appendix A consists of two sheets, the first is a photocopy of an aerial photograph of part of the Arlee hatchery. This sheet contains the approximate location of the pipe liner when construction is complete. Additionally this sheet shows part of the old brood pond which will be dedicated to wetland after completion of this project. The second sheet of Appendix A shows the Arlee hatchery in schematic form showing both the project area and the old brood pond. Area of pipe installation is noted as A and Brood pond noted as B in both sheets.

To accomplish the project, two PVC pipes will be installed as liners to transmit collected water to point of use. Pipes will be 24 inches in diameter and approximately 1500 feet long. An area approximately 1500 feet by 30 feet will be excavated to install the pipe and then bedded in suitable substrate to allow transmission of water to the pipelines and hence, on to the brood raceways.

This project is being proposed under provisions of the Reclamation - State Drought Emergency Relief Act of 1991, P. L. 103-250, established to provide funding for activities related to reducing the impacts on areas severely affected by drought.

POTENTIAL IMPACTS ON PHYSICAL ENVIRONMENT

1. Terrestrial & Aquatic life and habitats.

Many of the features in the area of the liner construction will be altered as a result of this project. Any wetland loss will be replaced by operating old brood pond as a stable wetland area as discussed under wetlands in #7 below. The broodstock at Jocko River Trout Hatchery (Arlee) will be more secure and less subject to stresses due to drought related water shortages. Fish from the broodstock at Arlee is used by Regional Fishery Managers to manage waters statewide. These fish are used to maintain established populations and provide recreational fishing where little or no opportunity would otherwise exist.

2. Water quality, Quantity & Distribution.

This project will intercept water intended for use in broodstock raceways and insure it is delivered to the raceway point of use. This is part of the water supply used to operate the Arlee hatchery and for which FWP has water use permits for non-consumptive use of the water. It will be utilized in the raceways to support broodstock and then returned to the discharge system and returned to flows from Arlee hatchery which ultimately enter the Jocko River through an on site holding pond and a series of beaver ponds prior to entering the Jocko River.

4. Vegetation cover, Quantity & Quality.

The area of pipeline installation is a highly disturbed area due to previous use as a fish rearing and handling facility. It has excavated areas which once were rearing ponds. Concrete control structures are in place which were used to control water in the former ponds. After rearing in these areas was abandoned, the water was allowed to flow to raceways over the ground in a ditch dug for this purpose. The waterway becomes plugged with water cress which further inhibits flow to the hatchery and enhances the percolation of hatchery water into the ground. After installation of the proposed pipes, the area will be covered and the surface allowed to become vegetated and stabilized with natural vegetation. This stabilized vegetative cover will enhance the area and provide for a natural setting, which cannot occur under present conditions.

5. Aesthetics.

After this project is completed the area will be landscaped and allowed to return to a more natural setting. This will improve the visual appearance of the area as well as providing additional habitat for wildlife in the area.

7. Unique, Endangered, Fragile, or Limited Environmental Resources.

Note: The evaluation applies to activities that will occur with the construction of a pipe liner project to correct low water flows due to drought conditions.

A. Floodplain Management, E.O. 11988

This project will occur within the confines of a developed fish hatchery. The

area has been disturbed by previous activities in developing the hatchery. Activities of this project will not affect floodplain management.

B. Protection of Wetlands, E.O. 11990

This project will disturb approximately one acre of a spring seep area which is used as part of the hatchery water supply. Disturbance will occur during construction. As a result some of the wetland features will be lost.

On the Arlee hatchery is located a brood pond of 3.5 - 4 acres which was used as a broodstock pond in the recent past. This pond has been managed as such with water levels drawn down at frequent intervals. It is in a depression with little shore area. To mitigate any loss of wetlands the department will dedicate this brood pond as a wetland area and maintain stable water levels so wetland characteristics can develop. As a result a net increase of wetlands will occur and will be of higher quality than wetlands which are affected by this project. See Appendix A.

C. Farmland Protection Policy Act, P.L. 97098

No Prime and Unique Farmlands will be impacted by this project. Mr. David Wolf of the Soil Conservation Service located in Polson, Lake County Montana was contacted regarding prime and unique farmlands. Mr. Wolf said there are no prime and unique farmlands that would be impacted by this project.

D. Endangered Species Act of 1973

Activities covered by this project will not have any impact on any federally listed endangered or threatened species or their designated critical habitats.

Species considered include: black-footed ferret, gray wolf, grizzly bear, eskimo curlew, interior least tern, piping plover, whooping crane, bald eagle, peregrine falcon, and the pallid sturgeon.

Mr. Dennis Flath, Montana Fish, Wildlife and Parks Nongame Coordinator, Bozeman MT, was consulted regarding the impacts this project would have on threatened and endangered species or their habitats. Mr. Flath said there would be no impacts on any federally listed threatened or endangered species by this project.

8. Demands on Environmental Resources of Land, Water, Air & Energy.

The only demands of resources due to this project will be the consumption of some level of petroleum based energy and electrical power during the construction phase of this project. There will be no additional energy requirements for operations after installation.

9. Historical & Archaeological Sites.

This project will have no impact on cultural or historical resources. A cultural and historical investigation of the site was conducted by Steve AAberg and Associates (a qualified firm to conduct cultural and historical investigations) in 1988. Their investigation did not reveal any historical resources on the Arlee hatchery. SHPO clearance letter and Steve AAbergs report is included as Appendix B.

7. Access to & Quality of Recreational and Wilderness Activities.
Access to recreation and wilderness activities will not be impacted by this project. Recreational opportunities may be enhanced due to the security afforded the Arlee rainbow broodstock as a result of the more reliable water supply that will be provided by this project. A more secure source of fish for management purposes will provide for better planing and development of recreational fishing opportunities.

8. Quantity and Distribution of Employment.
There will not be any permanent employment impacts due to this project. However, some increased employment opportunities may occur during the construction phase of this project.

10. Demands for Government Services.
Demands for government services will increase slightly as a result of this project. This increase will be in the form of developing contract documents, review of plans and specifications, project supervision and close out. No long-term additional government services will be required.

11. Industrial and Commercial Activity.
A slight increase in industrial and commercial activity will occur during the construction of this project. Effects will be primarily in the area of supplies and materials to support the construction phase and some possible renting or leasing of equipment.

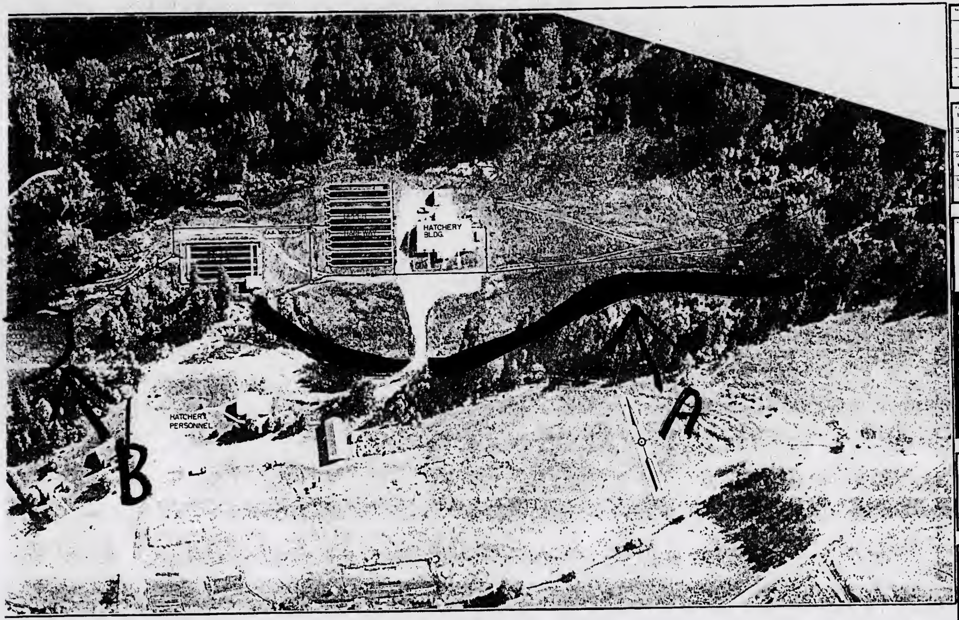
12. Demands for Energy.
Some energy to construct this project will be required. Energy demands will be primarily fossil fuels to operate equipment. Some electrical energy may be required to assemble and finish certain components of this project, such as concrete forms, finishing concrete surfaces and pipe slotting. No additional energy will be required to operate the project when it is completed.

13. Locally Adopted Environmental Plans and Goals.
Environmental goals or plans will not be affected by this project. However copies of this EA will be supplied to the Lake County Commissioners, Arlee City officials and the Confederated Salish and Kootenai tribes for their review and comment.

APPENDIX A

Aerial photograph and schematic showing relationship between pipe liner installation and the Old brood pond which will be designated as a permanent wetland.

Appendia A Sheet 1



AERIAL PLAN

1" = 50'±

AS RECORDED

148 02

AS NOTED

McGILLIVRAY

A. JENSEN

ENGINEERS
PLANNERS
DESIGNERS

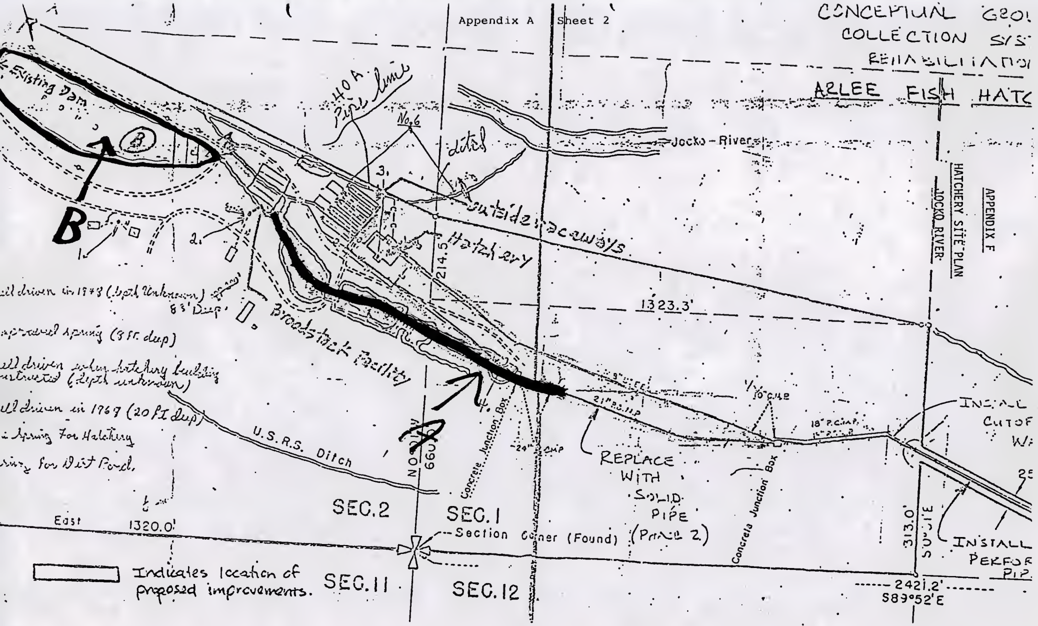
MONTANA DEP
OF
FISH, WILDLIF
AND PARKS

MONTANA A/E
89-35-02

JOCKO RIVER
TROUT HATCH
IMPROVEMENT
- 1991

AERIAL
PLAN

2


CONCEPTUAL GEO
COLLECTION SYS
REHABILITATIO
ARLEE FISH HATC
APPENDIX F
HATCHERY SITE PLAN
JOCKO RIVER
Existing Dam
B
B
40 A. Pipe line
No. 6
3.
ditch
Jocko - River
outside raceways
Hatchery
2.
1.
ll driven in 1948 (Depth Unknown)
83' Deep'
proved Spring (8 ft. deep)
ll driven when hatchery building
nstructed (depth unknown)
ll driven in 1967 (20 ft Deep)
Spring For Hatchery
ring for Dirt Pond.
Broodstock Facility
A
4.
Concrete Junction Box
214.5
1323.3'
9" C.C.
21" P.C.M.P.
1/10 C.M.P
24" C.M.P
REPLACE
WITH
SOLID
PIPE
(PHASE 2)
18" P.C.M.P.
Concrete Junction Box
INSTALL
CUTOF
W
25
INSTALL
PERFOR
PIP
313.0'
SUPPLIE
U.S.R.S. Ditch
N 0° 1' W
660.
SEC.2
SEC.1
SEC.11
SEC.12
East
1320.0'
Section Corner (Found)
2421.2'
S89°52'E
Indicates location of
proposed improvements.

APPENDIX B

Clearance letter from State Historical and Preservation Office and Cultural Resource Assessment of The Jocko River Trout Hatchery Prepared by Stephen Aaberg.

741.9

State Historic Preservation Office
Montana Historical Society
1410 8th Avenue • PO Box 201202 • Helena, MT 59620-1202 • (406) 444-7715 • FAX (406) 444-6575

September 19, 1994

Katherine Jabs
BOR, Montana Projects Office
P.O. Box 30137
Billings, MT 59107-0137

RE: Cultural Resource File Search - Water Gathering System at Jocko Fish Hatchery, MTAO No. MT-94-32: LA Co.

Dear Ms. Jabs:

We have reviewed the information received in this office September 8 regarding the above referenced project. Steve Aaberg's 1988 survey report identified no prehistoric or significant historic remains in the inspection area (all state-owned land at the hatchery). Aaberg's report also notes that "future developments [at the hatchery site] will not affect any known archaeological deposits" on the state property.

Based on our understanding of the project and the results of Aaberg's survey, we believe that this project will probably not adversely impact any significant intact cultural materials.

Thank you for consulting with us.

Sincerely,

Leanne Kurtz

Leanne Kurtz
Historian/Cultural Records Manager

FILE: BOR/1994

cc: Mike Andrews, BOR, Billings
Paul Valle, FWP Design and Construction, Helena

RECEIVED

AUG 2 3 1994

[illegible] CONSTRUCTION
DEPT. OF FISH, WILDLIFE & PARKS

RECEIVED

AUG 18 1994

FISHERIES DIV.
DEPT. FISH, WILDLIFE & PARKS

CULTURAL RESOURCE ASSESSMENT OF THE JOCKO RIVER STATE FISH HATCHERY

Prepared for: Montana Department of Fish, Wildlife and Parks
Fisheries Division
1420 East 6th Avenue
Helena, MT 59620

Prepared by: Stephen Aaberg
503 West Lamme
Bozeman, MT 59715

Date: February 29, 1988

PROJECT DESCRIPTION: The Fisheries Division of the Montana Department of Fish, Wildlife and Parks has owned and managed a trout hatchery at Arlee in the Jocko River valley since 1943. The water source for the hatchery has been a system of buried pipes, junction boxes and cisterns which tap the ground water and springs on the property. An extended period of drought has resulted in reduced flow in the Jocko River and a lowering of the water table. In December of 1987 the water table was so reduced that the water supply to the hatchery stopped providing water to the breeding tanks and raceways. The situation became critical for the Arlee strain of rainbow trout being bred and raised there. Trout had to be moved and a temporary surface water source tapped to keep remaining stock alive. Governor Ted Schwinden declared the situation at the Arlee hatchery an emergency and exempted the proposed remedy from a number of state environmental and fiscal policies. The plan for restoring the water supply to the hatchery involves re-excavation of the existing water line and reburial to a depth of 10 feet so the pipeline will remain below the water table permanently. Even though the proposed project is exempted from normal state construction requirements, Fisheries head Thurston Datson requested that an archaeological survey of not only the pipeline route but the entire hatchery property be conducted.

EXPECTED IMPACTS: Impacts relating to excavation and burial of the pipeline are obvious. The entire route of the existing supply pipeline will be excavated, pipe removed and the trench deepened to 10 feet. Several concrete junction boxes along the route will probably have to be reconstructed. Subsurface disturbance will occur along the existing pipeline route although undisturbed sediments below the present line will be excavated. Elsewhere on hatchery property no developments are planned. Survey of all state land at the hatchery will provide an information base for making management and/or development descisions in the future.

LOCATION: SW1/4SW1/4 & SE1/4SW1/4 Section 1 and the SE1/4SE1/4 & SW1/4SE1/4 Section 2; T16N,R20E; Lake County, Montana.

DATE FIELDWORK: February 25, 1988

HATCHERY HISTORY: The facility and grounds at the Jocko River Hatchery have a long history of use for breeding and raising fish. In 1930 the private property now owned by the state was purchased from Dale Hanson by a Mr. Ripley. Ripley constructed a series of ponds in the vicinity of the present facility and began a commercial trout hatchery. A few buildings were constructed at that time including a slaughter house. Horses were purchased and slaughtered by Ripley and used as trout feed. Skeletal remains of horses are present in several areas of the property today. In 1943 the private hatchery was purchased from Ripley by the State of Montana and has remained in state ownership ever since. All buildings on state property today were constructed after 1943 and most date to the late 1940s or early 1950s. The water supply pipeline discussed above which now serves the hatchery was constructed in 1949. Buildings associated with Ripley's private venture were either dismantled or moved or were destroyed by catastrophic floods in 1948 and 1964. Photographs at the state hatchery document the inundation of hatchery facilities during both floods.

PHYSIOGRAPHY AND ENVIRONMENT: The state fish hatchery is located in the Jocko River valley on the north edge of Arlee, MT. The river valley is about 2.5 miles wide here. The steep slopes of the Mission Range rise from the valley floor to the northeast while the Jocko Hills, lower more rounded mountains lie east. The Rattlesnake Mountains and Missoula Hills lie further to the southeast. Along the west side of the valley are the east edge of the Coeur d'Alene Mountains, not as high and rugged as the Missions but a massive range nonetheless. All mountains in the region are dominated by sedimentary rocks, notably limestones, shales and sandstone. Metamorphic quartzites and argillites are also present in the region.

Although the Jocko River valley was not glaciated except in alpine areas it was inundated by Glacial Lake Missoula. Lake sediments have formed extensive flats in the lower Jocko Valley. Along with the lacustrine deposits are extensive alluvial deposits laid down during Pleistocene times as ancient river terraces, glacial outwash and slopewash.

Hatchery property consists of several different landforms. The actual hatchery buildings and raceways were constructed in the active floodplain of the Jocko River which runs less than 1/4 mile north of the facility. The north half of state property and that which contains the hatchery facility lies in very moist, springy bottomland with a very high water table. The hatchery building and raceways lie near the middle of this low-lying area. Two springs discharge surficially in the bottomland, one running along the foot of a bluff to the southwest of the facility and one running along the north boundary of the property. The southern spring runs along the route of the present pipeline which supplies the hatchery. The northern spring was tapped as a temporary surficial source for the hatchery while the pipeline is being repaired. Except for the area around the raceways and hatchery building, the entire northern bottomland supports dense riparian vegetation consisting of cottonwood, alder, willow, dogwood, aspen and an occasional juniper, ponderosa pine and spruce tree. A very thick understory is also present in this moist lowland area.

The southern portion of state property which contains the residences of hatchery personnel and a large shop building consists of a series of high inactive terraces. These terraces rise 4 to 8 meters above the afore-mentioned bottomland. Subsurface exposures present as a gravel pit, irrigation ditches and eroding slopes suggest that all the high terraces present on state land are of fluvial or glacio-fluvial origin. These terraces occur at different elevations and are therefore of varying ages. Sorted river gravels and sands are evident in the profiles of all these high terraces. Some of the lower elevation terraces have colluvial material capping the gravels. This colluvial material is from 10 - 30cm thick. Gravels in the colluvium are generally quite small suggesting that the material was deposited as localized slopewash eroded from the slopes of higher, adjoining terraces. In some localities gravels were exposed on the surface. At least three different high terraces were noted during survey. Surfaces of these high terraces do not support trees but are covered with native grasses and forbs which are currently being overwhelmed by knapweed.

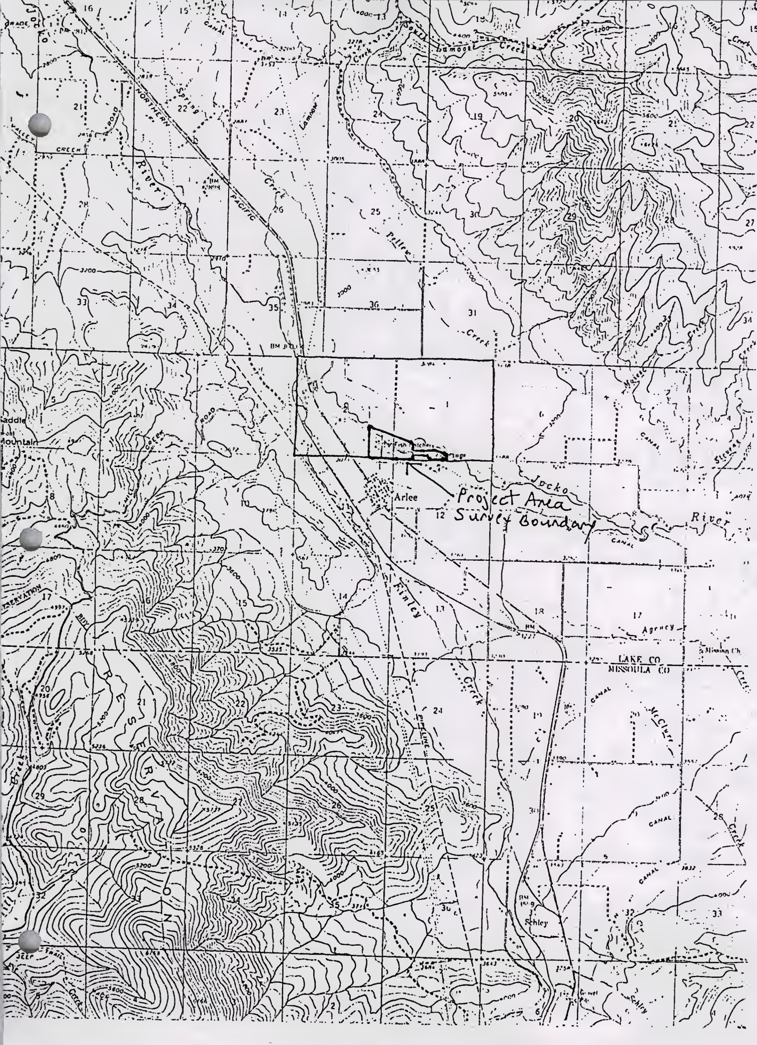
FIELD PROCEDURES: All state property at the Jocko River Fish Hatchery was inspected including the 25' wide pipeline corridor at the east end of the lower property. It was difficult to maintain a straight transect in the wet bottomland so this area was inspected in zig-zagging 40-meter spaced transects.

The high terraces were inspected in 30-meter-spaced, north-south oriented transects. Additional coverage in both areas of the property (high and low) was obatained by inspecting all cutbank and slope exposures. Irrigation ditches and stream banks were also investigated. An irrigation ditch ran the length of the property on the high terraces and was walked. Garden plots and irrigation ditch maintenance clearings provided other subsurface coverage. Vegetation was thick in the bottomland and on the high terraces but there was adequate surface and subsurface visibility. There was no snow cover at all on any of the property.

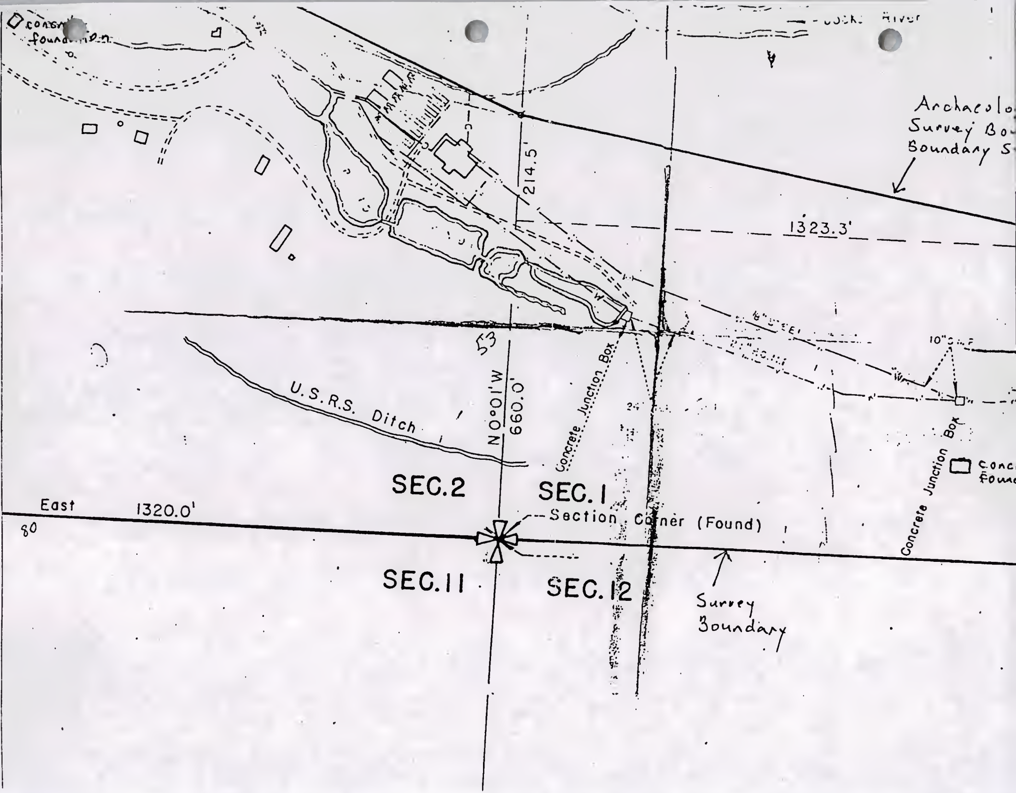
SURVEY RESULTS: Archaeological remains were not evident anywhere on state property at the Jocko Valley hatchery. The lowland area where pipeline reburial will occur consists of very moist terrain with a high water table. Gravels were visible from the surface downward in stream cuts and along the pipeline route where hydrologists had recently excavated test pits. There are virtually no alluvial fines in the bottomland area. The floods of 1948 and 1964 document the extremely dynamic nature of this active floodplain environment. There is almost no potential for recovering historic or prehistoric remains in this area. Old landforms simply do not exist. Additional disturbance occurred when the Ripley Ponds were constructed in the 1930s. Much of the area around the present hatchery building and raceways was excavated during pond construction. Many of these ponds were later filled in by the state. There is little undisturbed fill in this area. Some of the ponds remain along the edge of the high terrace bluffs to the south and west of the hatchery facility.

Two concrete foundations of relatively recent vintage were found on two of the high terraces. These features probably associate with the Ripley commercial operation but nothing remains around them. They do not seem to have much antiquity and are not unique architecturally. Neither of these features is threatened by development. A garbage dump which once served the hatchery was also noted on a high terrace. It was used by the state until relatively recently and is not a significant feature.

RECOMMENDATIONS: All property at the Jocko River State Fish Hatchery was inspected. Prehistoric remains or significant historic remains were not found. Planned pipeline reconstruction and any future developments will not affect any known archaeological deposits on state property here.



Project Area
Survey Boundary


concrete foundation
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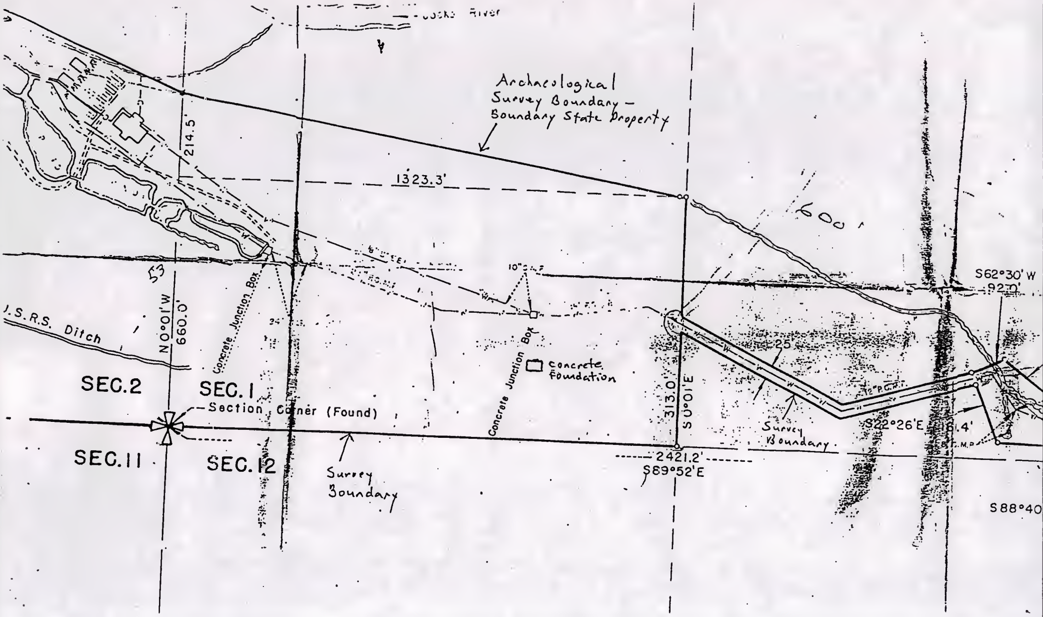
SEC.12
Survey Boundary


River
Archaeological
Survey Boundary -
Boundary State Property
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600'
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N0°01'W
660.0'
U.S.R.S. Ditch
Concrete Junction Box
Concrete Junction Box
Concrete
Foundation
10"
25
313.0'
S0°01'E
S62°30'W
92.0'
SEC.2
SEC.1
SEC.11
SEC.12
Section Corner (Found)
Survey
Boundary
Survey
Boundary
2421.2'
S89°52'E
S22°26'E
16.4'
12" P.C.P.
S88°40